

# Optimizing Bone Health for Children and Adolescents



# Children and Adolescents Are Not Meeting Calcium Needs

7 out of 10 boys and 9 out of 10 girls don't get the calcium they need.\*

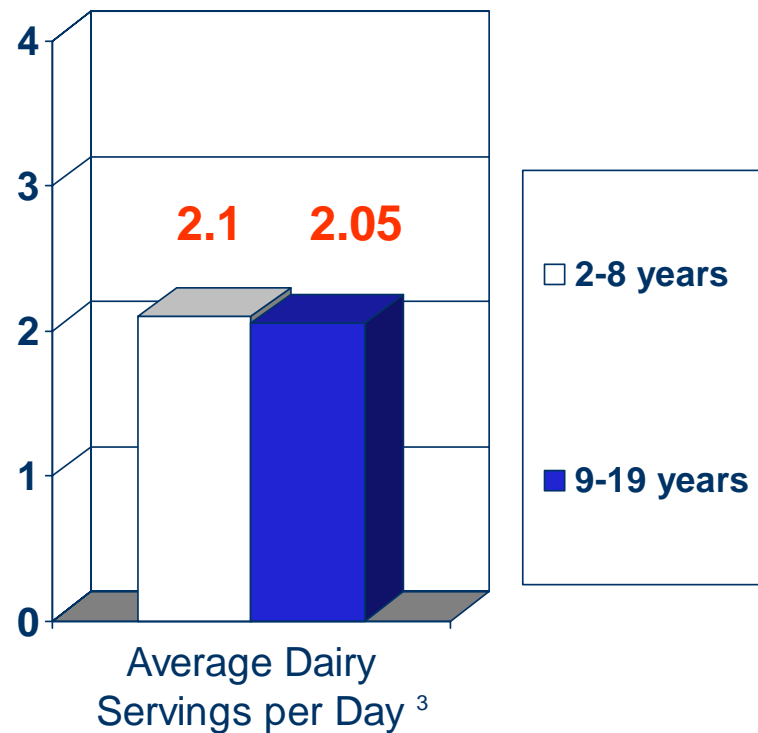
- Optimal calcium intake during childhood and adolescence is necessary to reduce the risk of calcium-related conditions later in life, such as high blood pressure, obesity and osteoporosis
- Nearly 40% of peak bone mass is accumulated during adolescence
- Low calcium intakes may be an important risk factor for fractures

\*USDA, CSFII 1994-96 (data for males and females ages 12-19 years old).

\*IOM Dietary Reference Intakes, 1997

# Children and Adolescents Do Not Meet Dairy Recommendations

Children and adolescents don't meet the recommended 3 servings of dairy each day



<sup>3</sup>Dairy Intake among U.S. Population, NHANES, 1999-2002

# AAP Recommends 3 A Day of Dairy

Age	Calcium Intake (mg/day) <sup>1</sup>	Servings of Dairy per Day <sup>2</sup>
1-3 years	500	3*
4-8 years	800	3**
9-18 years	1300	4**

\*Age-appropriate servings

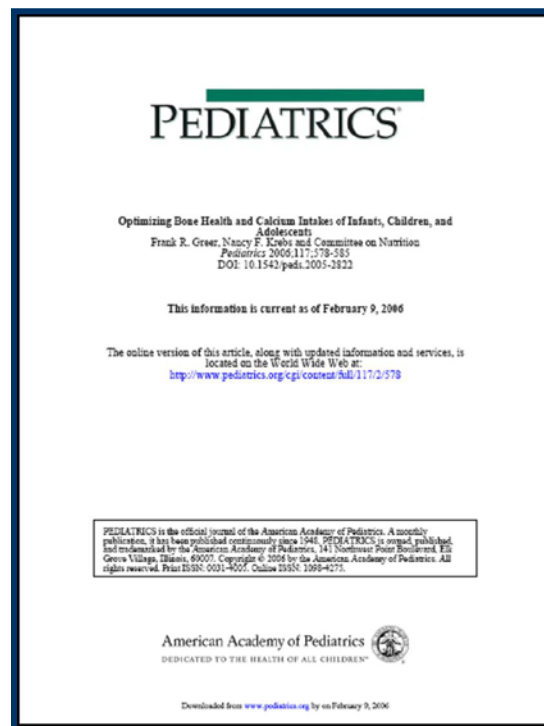
\*\*One serving equals 8 ounces of milk or milk equivalent

<sup>1</sup>Institute of Medicine, Dietary Reference Intakes, 1997.

<sup>2</sup>American Academy of Pediatrics, Optimizing bone health and calcium intakes of infants, children, and adolescents, *Pediatrics*, 117 (2):578-585; February, 2006.

# Pediatricians Call for Calcium Check-up

## Assess Calcium Intake



### ARE YOU AND YOUR CHILD EATING ENOUGH FOODS WITH CALCIUM?




Seven out of 10 boys and nine out of 10 girls don't get the calcium they need.

Dairy foods like milk, cheese and yogurt provide your body with the calcium it needs to make strong bones. Not eating enough calcium is a concern for the whole family. If you are not eating the recommended amount as the parent, then your child may not be getting enough either, which may increase risk of bone fractures and osteoporosis.

Assess your calcium intake with these questions and discuss the answers with your pediatrician, family doctor or registered dietitian.

<b>1</b> How many times a day do you (or your child) drink white or flavored milk? (whole, 2%, 1%, or skim milk) Answer: _____	<b>2</b> How often do you (or your child) eat cheese, yogurt, yogurt drinks, or other dairy products? Answer: _____	
<b>DOCTOR SAYS:</b> Children and adults can get the calcium they need by enjoying three servings of milk, yogurt or cheese each day (4 servings for adolescents). Choose low-fat or fat-free dairy foods often.		
<b>3</b> Do you (or your child) eat any of the following: broccoli, beans, cooked greens (eg, collards, turnip greens, kale), or tofu? Answer: _____	<b>4</b> Do you (or your child) drink calcium-fortified juices or eat any other calcium-fortified foods like cereal or bread? How often? Answer: _____	<b>5</b> Do you (or your child) take any calcium supplements including those containing vitamins? Answer: _____
<b>DOCTOR SAYS:</b> Dairy products, including milk, yogurt and cheese (low-fat and fat-free versions are encouraged), are the recommended way to get calcium and other nutrients like vitamin D and potassium. Many vegetables contain calcium, but large portions are required to get the amount of calcium you need. Some foods have added calcium (fortified), but they don't have other good vitamins and minerals found in dairy. For people who cannot or will not eat dairy foods, calcium supplements might be needed.		
<b>6</b> How often do you (or your child) drink soft drinks, fruit drinks, fruitades, etc? Answer: _____	<b>7</b> How many times a week do you (or your child) participate in vigorous physical activity? Answer: _____	
<b>DOCTOR SAYS:</b> Milk is a better drink choice. If you drink a lot of soft drinks and fruit juices (and/or fruit drinks instead of milk, you might not be getting enough calcium or other important nutrients.	<b>DOCTOR SAYS:</b> Physical activity, mostly weight-bearing exercise (such as running or playing basketball), is encouraged as part of an overall healthy bone program. Be physically active most days of the week.	
<b>8</b> Have you (or has your child) had any bone fractures? Answer: _____	<b>9</b> Is there a family history of osteoporosis? Answer: _____	
<b>DOCTOR SAYS:</b> A family history of bone fractures or osteoporosis means it's even MORE important to get the right amount of calcium to improve bone health.		

BE A ROLE MODEL AND ENJOY DAIRY WITH YOUR FAMILY (ONE SERVING\* EQUALS):

 8 ounces (1 cup) milk *For ages 4 and older	 1 to 1 1/2 ounces of cheese	 8 to 16 ounce container of yogurt
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Visit [DairyDrops.org](http://DairyDrops.org) to sign up to be a 3-A-Day™ or Dairy Mom. As a 3-A-Day Mom, you'll receive a discount receipt for family milk use, exclusive membership offers and great advice from other moms.

**3-A-Day**  
AMERICAN ACADEMY OF PEDIATRICS  
100% MILK  
100% YOGURT

American Academy of Pediatrics  
DEDICATED TO THE HEALTH OF ALL CHILDREN™

# Pediatricians Call for Calcium Check-up



**7 out of 10 boys and 9 out of 10 girls don't get the calcium they need**

The 2006 American Academy of Pediatrics report on optimizing bone health supports dairy's role in the bone health of children and adolescents.

Talk to your pediatrician about including three servings of dairy a day (milk, cheese or yogurt) to help build stronger bones.

**• Strong Bone Building Tips:** Most people can achieve the recommended dairy intake of calcium by eating three servings of milk, cheese, or yogurt each day. Low-fat and fat-free versions are encouraged. Non-dairy food sources and supplements are an alternative, but these products do not offer the same nutrient benefits of dairy foods.

Visit [www.3aday.org/parent](http://www.3aday.org/parent) to download a calcium assessment questionnaire for use with patients and [www.3aday.org](http://www.3aday.org) for additional resources.

**• Model Healthy Habits:** All family members should evaluate their calcium intake and consider three servings of dairy a day (3 for adolescents) for building stronger bones.

**• Lactose Intolerance Doesn't Require Dairy Avoidance:** Many children with lactose intolerance can drink small amounts of milk without discomfort, especially when accompanied by other foods. Or, they can try consuming lactose-free, yogurt, or using lactase enzymes, or lactose-free or lactose-reduced milk.

**• Be Active:** Encourage physical activity primarily weight-bearing exercise as part of an overall healthy bone program.

**Recommendations for Adequate Dairy Calcium Intake (milk and servings of dairy per day in the United States)**

Age	Calcium Intake (mg/day)	Servings of Dairy per Day*
1-3 years	700	2
4-8 years	800	2½
9-18 years	1,300	3½

\*The serving equals 8 ounces of milk or milk product.

**3-A-Day**  
Milk Cheese Yogurt  
Have you had your 3 today?  
[3aday.org](http://3aday.org)  
American Academy of Pediatrics  
Endorsed by the American Academy of Pediatrics

- Recommend 3 servings of dairy a day (4 for adolescents)
- Model healthy habits
- Be active
- Choose dairy first for lactose intolerance



# Encourage Parental Role Modeling

## Role Modeling is Key

- Children drink more milk when their parents drink milk.
- Role modeling is effective for African-American girls.

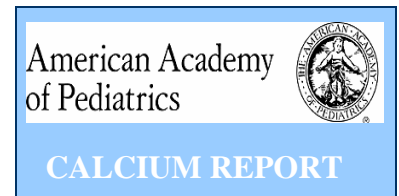
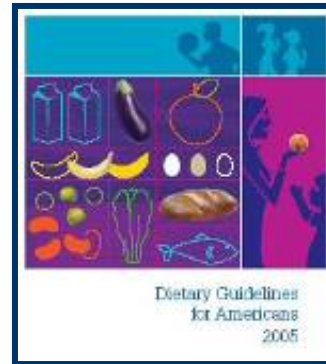
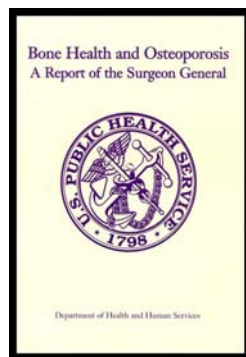
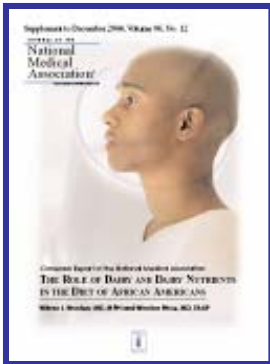
## Moms Need Calcium Too

- Women consume on average less than 1.5 servings of dairy foods a day.
- Only 15 percent of moms and young women (age 31-50) meet current calcium recommendations.



Adequate calcium intake by all members of the family is important.

# Strong Foundation for 3 Servings of Dairy a Day





# Try These Tips for Tolerance

Choose Dairy First to Enhance Diet Quality



**D**rink milk with meals.

**A**ged cheeses like Cheddar and Swiss are naturally low in lactose.

**I**ntroduce dairy slowly. Gradually increase the amount.

**R**educe it. Enjoy lactose-free milk and milk products.

**Y**ogurt with live active cultures helps to digest lactose.



# **Importance of Dairy Foods for African-American Populations**



# Lactose Intolerance



*Lactose intolerance is the key barrier to dairy recommendations and consumption*

# Talk to Your African American Patients About 3 A Day of Dairy



- Nearly half of African Americans consume less than one serving daily\*
- Dairy foods provide nutrients that may help reduce the risk of chronic conditions
- The NMA recommends 3-4 servings of low-fat dairy per day
- Share tips with patients for comfortably consuming dairy foods



Visit [www.nationaldairycouncil.org](http://www.nationaldairycouncil.org) for downloadable tools to share with patients.

\*Consensus Report of the National Medical Association: The Role of Dairy and Dairy Nutrients in the Diet of African Americans, 2004